

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF INDIANA

RICHARD MESSENGER,

Plaintiff,

v.

NORFOLK SOUTHERN RAILWAY
COMPANY,

Defendant.

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CIVIL NO. 3:13cv1098

OPINION AND ORDER

This matter is before the court on a motion to exclude expert testimony, filed by the Defendant, Norfolk Southern Railway Company (“Norfolk Southern”), on December 9, 2014. On this same date, Norfolk Southern filed a motion for summary judgment. The plaintiff, Richard Messenger (“Messenger”), filed a response to the motions on February 3, 2015, to which Norfolk Southern replied on February 12, 2015.

For the following reasons, Norfolk Southern’s motions will both be granted.

Summary Judgment

Summary judgment must be granted when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). A genuine issue of material fact exists when “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). Not every dispute between the parties precludes summary judgment, however, since “[o]nly disputes over facts that might affect the outcome of the suit under the governing law” warrant a trial. Id. To determine whether a genuine issue of material fact exists, the court must construe all facts in the light most favorable to the non-moving party and draw all reasonable inferences in

that party's favor. Heft v. Moore, 351 F.3d 278, 282 (7th Cir. 2003). A party opposing a properly supported summary judgment motion may not rely merely on allegations or denials in its own pleading, but rather must "marshal and present the court with the evidence she contends will prove her case." Goodman v. Nat'l Sec. Agency, Inc., 621 F.3d 651, 654 (7th Cir. 2010).

Discussion

As the motion for summary judgment is based on the motion to exclude expert testimony, and Messenger has conceded that if the motion to exclude is granted the motion for summary judgment must also be granted. The following facts are relevant to both motions.

On June 1, 1999, Messenger began working as a conductor at Norfolk Southern rail yard in Elkhart, Indiana. (Messenger Dep. at 76:13-25; 77:1-23). As a conductor, Messenger's primary responsibility involved using yard locomotive power to pull cuts of cars out of the hump bowl and set them out into various departure tracks. (Weames Declaration with exhibits A and B, Report at 3). Messenger would ride the cab until he got to the switches that he had to throw. (Messenger Dep. at 121:2-6). He would then ride on the steps of the cab until they tied on to the first car. *Id.* At that point, he would then walk the track. *Id.* When not performing this task, Messenger would open knuckles, adjust draw bars, and make couplings. (*Id.* at 121:11-14). Messenger worked an eight hour shift while at Norfolk Southern. (*Id.* at 111:24; 112:1-2).

While still employed by Norfolk Southern, Messenger was diagnosed with carpal tunnel syndrome and cubital tunnel syndrome of his right upper extremity. (Mencias Dep. at 18:15-25) On February 22, 2011, Messenger had surgery on his right wrist and elbow to relieve the symptoms. (*Id.* at 19:1-5). On October 21, 2013, Messenger brought this current action under FELA claiming Norfolk Southern's alleged failure to provide a safe work environment was the

cause of his injuries. (Messenger Complaint at ¶15).

When asked what Norfolk Southern did to cause his injuries, Messenger referred to Norfolk Southern's policy requiring conductors to ride on the side of train cars while moving and not allowing them to get off and walk along. (Messenger Dep. at 109:6-24; 110:1-10). Messenger said that he spent between an hour and an hour and a half hanging from the rail cars during his eight hour shift, but admitted he was "guessing." (*Id.* at 112:11-18). Messenger provided no other testimony as to the nature, duration, or force of his exposures. Dr. Natalie Frentz is Messenger's primary care physician. (Frentz Dep. at 15:1-4). Dr. Mencias, an orthopedic surgeon, performed Messenger's surgery to relieve his symptoms. (Mencias Dep. at 19:1-7). Neither Dr. Frentz nor Dr. Mencias offer an expert opinion as to the cause of Messenger's injuries. (Frentz Dep. at 8:16- 25; 9:1-25) (Mencias Dep. at 9:16-25; 10:1-8; 23:10-21). Furthermore, Messenger's treating rheumatologist, Dr. Natali Balog, also does not have an opinion as to the cause of Messenger's condition. (Balog Dep. at 9:21-25; 10:1-25; 11:1-25; 12:1-25; 13:1-25; 14:1-11).

Dr. Mencias stated that obesity, diabetes, and rheumatoid arthritis are all factors that could cause carpal tunnel syndrome. (Mencias Dep. at 22:1-25). Messenger suffers from Type 2 diabetes and rheumatoid arthritis. (Gates Dep. at 20:1-7)(Frentz Dep. at 17:17-23; 19:3-6) (Balog Dep. at 21:5-13). Messenger is also obese. (Gates Dep. at 20:1-7) (Levine Declaration with exhibits A and B, Report at 15).

In addition to his health factors, Messenger also rides a motorcycle, is an avid golfer, and uses power tools at his home. Messenger has been consistently riding a motorcycle since 1974. (Messenger Dep. at 45:9-19). As for golfing, Messenger has been a steady player since he was

37 years old. (*Id.* at 36:14-19). Messenger's power tool collection includes a table saw, chop saw, radial arm saw, nail guns, and a drill press. (*Id.* at 59:17-21; 61:8-22). Messenger did not provide to his treating doctors and expert witness any specific information as to the nature, duration, or force in his right wrist and elbow as to these non-railroad activities.

Messenger retained Dr. Dennis Gates to review his medical history and provide expert medical testimony as to the cause of his carpal tunnel syndrome and cubital tunnel syndrome. (Gates Report at 6) (Gates Dep. at 16:11-15). Dr. Gates is not one of Messenger's treating physicians. (Gates Dep. at 12:23-25). Dr. Gates is neither an ergonomist nor a biomechanical expert. (*Id.* at 6:24-25; 7:1-7).

Dr. Gates opined "with a reasonable degree of medical certainty that the repetitive motions of being a Railroad Conductor caused the carpal tunnel syndrome and cubital tunnel syndrome and necessitated the treatment that [Messenger] had." (Gates Report). Dr. Gates relied on his own examination of Messenger, Messenger's medical files and deposition testimony, answers to Norfolk Southern's interrogatories, and job descriptions describing the "Tasks, Duties, & Responsibilities of a Conductor" for the railroads of Burlington Northern Santa Fe, Union Pacific, Canadian National Railway, and a general description that did not bear the name of any railroad. (Gates Report) (Conductor Position Descriptions, Exhibits 4-7 to Gates Deposition). During Dr. Gates' deposition, Messenger's counsel offered a training video of CSX railroad workers performing job duties and tasks to supplement Dr. Gates' Report. (Gate Dep. at 50:3 – 58:1-7). Dr. Gates admitted the tape, from another railroad (CSX), was over 13 years old, did not involve a conductor position for Norfolk Southern, was recorded at an unknown location, and did not show the frequency with which a conductor at Norfolk Southern would perform

work-related duties or the ergonomic forces to which Norfolk Southern conductors would be exposed. (*Id.* at 66:2-25).

Dr. Gates used “differential etiology” or “differential diagnosis” in forming his conclusions as to the cause of Messenger’s injury. (Gates Dep. at 73:12-16). In applying his methodology, Dr. Gates said he followed the AMA Guides to the Evaluation of Disease and Injury Causation. (*Id.* at 36:20-25; 39:1-6). The AMA Guidelines provide six steps when making a determination of the work-relatedness of a disease: (1) Identify evidence of the disease; (2) Review and assess the available epidemiologic evidence for a causal relationship; (3) Obtain and assess the evidence of exposure; (4) Consider other relevant factors; (5) Judge the validity of testimony; and (6) Form conclusions about the work-relatedness of the disease in the person undergoing evaluation. (AMA: Guides to the Evaluation of Disease and Injury Causation, at 40, Ex. 2 to Gates Deposition).

For reviewing and assessing the available epidemiologic evidence for a causal relationship, Dr. Gates said he assumed the Guidelines were referencing the medical literature that involved repetitive things for carpal tunnel. (Gates Dep. at 39:8-25; 40:1-7). However, Dr. Gates admitted that he did not rely on any literature in coming to his conclusion. (*Id.* at 29:14-25; 30:1-19; 40:2-7).

For obtaining and assessing the evidence of exposure, the best type of information stated in the hierarchy of exposure data table in the AMA Guides is a quantified personal or individualized measurement, while the worst type of data is that from employment in a plant or obtained from the employer. (AMA: Guides to the Evaluation of Disease and Injury Causation, Table 3-3, at 41). Dr. Gates relied on the general job descriptions of railroad conductors for other

railroads, speaking with Messenger, and testimony from Messenger's deposition. (Gates Dep. at 40:8-25; 41:1-25). Dr. Gates did not speak with any other railroad workers, did not have experience in performing individualized measurements involving repetition of particular tasks on particular body parts, did not have a quantified personal or individualized measurement of Messenger's or any other Norfolk Southern conductor's work-related exposure at the Elkhart yard, nor had he ever witnessed a railroad conductor at his/her job or been to the Elkhart yard where Messenger worked, all of which is considered the best evidence under the AMA hierarchy. (Gates Dep. at 41:3-10; 42:1-19; 49:15-24). When asked if he agreed with the AMA hierarchy on exposure data, Dr. Gates "disagreed" despite claiming to have followed the method. (Gates Dep. at 43:12-18). Dr. Gates stated:

- Q. So do you agree with the AMA that the best evidence of exposure is a quantified, individualized measurement of the individual?
- A. In regard to the causation of carpal tunnel syndrome?
- Q. In a particular individual, yes.
- A. No. I - - I would - - I would disagree.
- Q. Okay. So you disagree with the AMA on this point?
- A. That's putting it too strong. Sorry.
- Q. Okay.
- A. I disagree as to - - it's - - the statement is, really - - this is excessively detailed. It doesn't - - you don't need that to make the conclusion. So my answer would be that the two of them are - - are nice. I guess they're good for a legal case. But on a practical basis, they're not necessary.

(*Id.* at 43:12-25; 44:1-4).

Dr. Gates said the way Messenger described his job duties made it seem "pretty obvious"

exposure to work-related factors helped cause his carpal tunnel syndrome and cubital tunnel syndrome. (*Id.* at 34:24-25; 35:1-15). On this point, Dr. Gates stated:

A. Well, just the way that - - that he described his job to me, you know, holding on, moving, twisting, pulling. It seemed - - it seemed pretty obvious - -

Q. Okay.

A. - - that it contributed to it.

Q. Is it possible to hold on, move, and pull in a manner that is safe and does not lead to carpal tunnel syndrome?

A. Sure.

Q. Okay. So how do you know that that did not happen in his case?

A. Because - - simply because - - because he developed it.

(*Id.* at 35:2-15). Dr. Gates even analogized his conclusion to the legal doctrine of “*res ipsa loquitur*” or the thing speaks for itself. (*Id.* at 35:19-25). When asked how he knew Messenger’s alleged work exposure would be “excessive,” Dr. Gates said:

Q. For you to say something like “excessive,” would you - - how do you know it was excessive?

A. Only when the disease arises. I mean - - yes. It’s like a runner. How much is too much running for - - and training? It’s only when the knee starts to hurt.

(*Id.* at 31:16-21).

As to the frequency in which Messenger performed the allegedly harmful work-related tasks, Dr. Gates stated he did not have an “exact number” and admitted it was an “unknown variable.” (*Id.* at 75:4-6; 76:5-10). When asked for his basis for using the term “frequent”, Dr. Gates stated:

- Q. Okay. And you do not have any type of quantitative assessment of Mr. Messenger here in this case; correct?
- A. No, not quantitative with a number.
- Q. Right.
- A. But we did quantify by using those terminologies of frequent, infrequent.
- Q. Right. And my question is the basis for you saying "frequent." You understand that; right?
- A. Yes.
- Q. Okay. And you also don't have any data or information as to the frequency of tasks being done by another Norfolk Southern conductor not Mr. Messenger - - because we understand he's retired - - isn't that correct?
- A. I - - I just - - my common sense tells me that it would be about the same. It would be hard to do the job without using your right hand - -
- Q. Right.
- A. - - frequently.
- Q. Right. But when - - do you have a number in mind when frequency becomes occasional?
- A. No.
- Q. So is it just a subjective judgment on your part?
- A. Yes.

(*Id.* at. 82:17-25; 83:1-18).

In considering other relevant factors as required by the AMA guidelines, Dr. Gates mentioned Messenger's weight, arthritis, and diabetes. On this point, Dr. Gates stated:

- Q. What are the - - other than the ones you've mentioned already - - you don't have to repeat yourself - - what are other risk factors for carpal tunnel syndrome?

A. You've really got most of them there. There's arthritis, whether rheumatoid or osteo. It's obesity. It's diabetes.

Q. Okay. Anything else?

A. No. He's got risk factors for everything. You read his - - you took his deposition.

(*Id.* at 20:1-10). However, despite these contributing factors, Dr. Gates opined Messenger's job as a conductor was the prominent or initiating factor because it involved motion of some kind. (*Id.* at 33:2-25; 34:1-19). Specifically, Dr. Gates stated:

Q. Okay. So the question for - - my question for you is, well, how do you sort all this out between his work at the railroad and these other factors?

A. You . . . it - - you have all these factors, and this seemed to be the most prominent one.

Q. Why do you believe this is the most prominent one?

A. Because that's what he said.

(*Id.* at 32:24-25; 33:1-6).

Dr. Gates was also aware of the fact that Messenger was a motorcyclist, an avid golfer, and used power tools at his home. (*Id.* at 26:9-20; 27:13-16; 28:10-14). When asked how he ruled out these factors, Dr. Gates first stated that they were all aggravating factors that could not be ruled out, but then stated he was able to rule them out because he could not find any literature on the subject. (*Id.* at 28:19-25; 29:1-13). Dr. Gates could not remember any of the articles or point to any literature upon which he was referring (*Id.* at 29:14-25; 30:1-25; 31:1-21). When pressed further on the issue of Messenger's motorcycle riding, Dr. Gates said he had considered it as a cause, but was able to rule it out because it would only be "minor." (*Id.* at 75:17-24). When asked how he knew the frequency, Dr. Gates admitted it was an unknown

variable like the frequency in which Messenger performed work-related tasks. (*Id.* at 75:25; 76:1-10). However, Dr. Gates said he was not comparing two unknown variables because Messenger's workplace exposure to his right hand happened during the majority of time during his shift, but the frequency with which he rode his motorcycle was occasional or recreational. (*Id.* at 76:11-25; 77:7-25; 78:1-24). Specifically, Dr. Gates stated:

- A. And, again, it's not - - you don't have a quantifiable, so in that sense it's an unknown variable as to the exact timing. But you have a general concept of time involved in the railroad versus riding the motorcycle.
- Q. And what is your general concept of the time?
- A. Well, that he was doing his 40 to 60 hours a week using his hand on the - - there - - on the railroad and his motorcycle was recreational.
- Q. Okay. But you can't be specific within the 40, 60 hours on the time he used his hand; correct?
- A. No.
- Q. Is that correct?
- A. Correct.
- Q. And you have no specific information about the times he used his motorcycle; correct?
- A. Just what he said, recreational, weekends.
- Q. Okay. But no specific amount; correct?
- A. No.
- Q. Is that correct?
- A. Correct.

(*Id.* at 78:14-25; 79:1-11).

When asked if there was a known error rate for his methodology, Dr. Gates stated he was

not aware of one and thought his was zero, but stated one might disagree with the assertion. (*Id.* at 47:15-25; 48:1-18). Finally, when asked whether his methodology was “falsifiable,” Dr. Gates stated in his opinion it was not. (*Id.* at 69:1-25; 70:1-11).

Norfolk Southern retained Greg G. Weames, CPE, CCPE, CRSP to draft a report relating to Messenger in regards to possible injuries incurred to his right arm while in the employ of Norfolk Southern as a conductor. (Weames Report at 2). Mr. Weames has specialized education, training, and experience in biomechanics and ergonomics. *Id.* He has worked with the railroad industry for several years regarding ergonomics and the safety of railroad tasks. *Id.*

Mr. Weames performed a job site analysis by observing and measuring the conduct of an Norfolk Southern conductor at the Elkhart rail yard. (*Id.* at 2, 6). He then compared those findings to epidemiological studies and other relevant factors consistent with AMA Guidelines for Determination of Work-Relatedness of a Disease to assess whether a Norfolk Southern conductor position at the Elkhart rail yard would cause carpal tunnel syndrome and cubital tunnel syndrome. (*Id.* at 3, 12). Based on his findings, Mr. Weames determined with a reasonable degree of scientific certainty that the job of conductor for Norfolk Southern at the Elkhart yard does not present an increased risk for the development of musculoskeletal disorders of carpal tunnel syndrome or cubital tunnel syndrome. (*Id.* at 28).

In performing his job site analysis, Mr. Weames used a work sampling method. (*Id.* at 9). “Working sampling is particularly useful in the analysis of non-repetitive or irregularly occurring activities where no complete methods or frequency descriptions are available.” *Id.* Mr. Weames observed Elkhart yard conductors: receive train move assignments from the trainmaster; travel engine lights to the particular bowl track; couple locomotives to the cut of

cars; walk the cut of cars to ensure they were all coupled together; obtain authorization from the tower to conduct the train move; ride the car and the train out of the bowl track; step off of the car and oversee a shove move of the train into the departure tracks once out the of bowl track; and apply hand brakes, uncouple locomotives, and wait for move assignments when cars were spotted. (*Id.* at 6). The move assignment took approximately one hour and the conductor who was observed indicated that the train move out was “typical.” *Id.*

While making these observations, Mr. Weames discussed with supervisors and employees who stated it was consistent that a conductor would be assigned between five to ten moves a shift, thus making the average seven. (*Id.* at 10, 21). Based on these observations, Mr. Weames determined the frequency at which a Norfolk Southern Elkhart yard conductor’s right extremity would be exposed to work-related factors could be considered “occasionally” or less than 33 percent. (*Id.* at 21). Mr. Weames noted that the scientific literature had not demonstrated that occasional levels of exposure were associated with musculoskeletal disorders of the distal upper extremity. *Id.*

Finally, Mr. Weames analyzed his observations of the Norfolk Southern conductor’s hand activity using a strain index analysis in determining whether there is an increased risk for the development of upper extremity morbidity for the conductor position at the Elkhart yard. (*Id.* at 10-11). “Epidemiologic research has demonstrated that an increase in relative risk for upper extremity morbidity begins at a greater [strain index] scores that are greater than 6.1 and that his threshold can be elevated, depending on the [strain index] application.” (*Id.* at 11). After applying his observations to the strain index, Mr. Weames determined the hand activity of a Norfolk Southern conductor at the Elkhart yard received a strain index of less than 5, which was

below the 6.1 level found to be associated with distal upper extremity morbidity, thus making the conductor position with Norfolk Southern non-hazardous. (*Id.* at 17-20).

After reviewing the findings of his individualized assessment for the position of Norfolk Southern conductor at the Elkhart yard, Mr. Weames considered the testimony of Dr. Gates, Dr. Mencias, and Dr. Frentz regarding the subject matter of ergonomics. (*Id.* at 23). Even though Dr. Gates claimed to have followed AMA Guidelines in his methodology, Mr. Weames noted that Dr. Gates could not name the epidemiologic evidence or literature he used, did not have an individualized measurement, nor did he have any objective observations of the conductor position he was opining on. (*Id.* at 26). Because Dr. Gates did not properly follow the AMA Guidelines, his subjective opinions were in error as demonstrated by Mr. Weames' report. *Id.* Finally, Mr. Weames' report took into account that Dr. Frentz, Messenger's treating physician, did not have an opinion regarding the work-relatedness of the claims of Messenger. (*Id.* at 27).

Norfolk Southern also retained Dr. Neil H. Levine, M.D. to opine as to the possible causation of Messenger's carpal tunnel syndrome and cubital tunnel syndrome. (Levine Report at 1). In his report, Dr. Levine opined with a reasonable degree of medical certainty that Messenger's non-occupational factors: obesity, diabetes, hypothyroidism, and rheumatoid arthritis were the primary predisposing causes to Messenger's development of carpal tunnel syndrome and cubital tunnel syndrome. (*Id.* at 18). Furthermore, Dr. Levine opined that "Mr. Messenger's claim that his carpal tunnel syndrome and cubital tunnel syndrome were caused by his activity holding onto the freight cars in the Elkhart yard does not meet the criteria for determination of work-relatedness of disease." *Id.*

In coming to his conclusions, Dr. Levine relied on the AMA Guides to the Evaluation of

Disease and Injury Causation by Dr. Melhorn and Dr. Ackerman. (*Id.* at 16). In reviewing the available epidemiologic evidence, Dr. Levine found that Messenger had multiple predisposing health factors that can be attributed to the development of carpal tunnel syndrome and cubital tunnel syndrome including obesity, diabetes, hypothyroidism, and rheumatoid arthritis. *Id.*

In obtaining and assessing the evidence of exposure, Dr. Levine reviewed Mr. Weames' report regarding exposure of harmful forces to Norfolk Southern conductors at the Elkhart rail yard and a study published by Mr. Weames regarding data compilation and risk analysis for exposure to occupational physical factors for North American railroad train crew. (*Id.* at 17). Dr. Levine noted that Mr. Weames' report and study was a quantified personal or individualized measurement of actual exposure, which is considered by the AMA Guidelines as the best type of data for assessing evidence of exposure. *Id.* Dr. Levine also noted that Dr. Gates did not use a quantified or individualized measurement, but instead relied on Messenger's descriptions of his exposure, which is considered by the AMA Guidelines as the least effective type of data for assessing evidence of exposure. (*Id.* at 17). Because Dr. Gates used the least effective form of data to assess evidence of exposure and his assessment conflicted with Mr. Weames' findings, Dr. Levine opined that Dr. Gates' proposition as to the cause of Messenger's ailments was falsifiable. (*Id.* at 18). Finally, Dr. Levine argued one would not be able to rule out Messenger's frequent riding of motorcycles, golf playing, and use of power tools as being a cause to his injuries by following Dr. Gates's methodology. *Id.*

An FELA plaintiff must offer evidence proving the common law elements of negligence, including duty, breach, foreseeability, and causation. *Williams v. National R.R. Passenger Corp.*, 161 F.3d 1059, 1061-62 (7th Cir. 1998). When the origin of an injury is not obvious and

“has multiple potential etiologies, expert testimony is necessary to establish causation.” *Myers v. Illinois Cent. R.R. Co.*, 629 F.3d 639, 643 (7th Cir. 2010). Thus, for cumulative trauma disorders involving wear and tear on the body, an FELA plaintiff is required to produce expert medical testimony to establish the causation element. *Id.*

To establish causation under the FELA, it is not sufficient that a plaintiff produce evidence only of general causation, *i.e.*, that the alleged force could *potentially* cause the condition complained of. Rather, the plaintiff must come forward with evidence of specific causation, *i.e.*, that the alleged force *in fact* caused the plaintiff’s particular condition. *Bowers v. Norfolk S. Ry. Co.*, 537 F. Supp. 2d 1343, 1377 (M.D. Ga. 2007); *see also Myers*, 629 F.3d at 643-44; *Smelser v. Norfolk S. Ry. Co.*, 105 F.3d 299, 305 (6th Cir. 1997); *cf. Aurand v. Norfolk S. Ry. Co.*, 802 F. Supp. 2d 950, 953 (N.D. Ind. 2011).

It is well settled that the standard of causation under the FELA and the standards for admission of expert testimony under the Federal Rules of Evidence are discrete issues and do not affect each other. *Claar v. Burlington N. R.R. Co.*, 29 F.3d 499, 503 (9th Cir. 1994); *see also Wills v. Amerada Hess Corp.*, 379 F.3d 32, 47 (2d Cir. 2004); *Taylor v. Consolidated Rail Corp.*, 114 F.3d 1189 (Table), 1997 WL 321142, at **6-7 (6th Cir. June 11, 1997); *Bowers*, 537 F. Supp. 2d at 1352.

“Thus, the fact that FELA employs a relaxed standard of causation ‘does [not] mean that in FELA cases courts must allow expert testimony that in other contexts would be inadmissible.’” *Bowers*, 537 F. Supp. 2d at 1352 (quoting *Claar*, 29 F.3d at 499). “Rather, the admission of expert testimony is controlled—even in FELA cases—by the Federal Rules of Evidence and *Daubert*.” *Id.*

Under the Federal Rules of Evidence, expert medical opinion must have a scientific or epidemiological foundation, and the Seventh Circuit has cautioned that “courts must be particularly wary of unfounded expert opinion when medical causation is the issue.” *Cella v. United States*, 998 F.2d 418, 423, 424 (7th Cir. 1993). This is so because “there is not much difficulty in finding a medical expert witness to testify to virtually any theory of medical causation short of the fantastic.” *Id.* at 423 (quoting *Stoleson v. United States*, 708 F.2d 1217, 1222 (7th Cir. 1983)).

In all cases, including those brought under the FELA, “the proponent of the expert witness bears the burden of establishing that the expert’s testimony satisfies the qualification, reliability, and helpfulness requirements of Rule 702 and *Daubert*,” and “any step that renders the analysis unreliable renders the . . . testimony inadmissible.” *Bowers*, 537 F. Supp. 2d at 1350.

Admissibility of expert testimony is governed by Federal Rule of Evidence 702 and 703 and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993). Rule 702 of the Federal Rules of Evidence permits opinion testimony by qualified persons with “scientific, technical, or other specialized knowledge [that] will help the trier of fact to understand the evidence or to determine a fact in issue” if (1) “the testimony is based upon sufficient facts or data”; (2) “the testimony is the product of reliable principles and methods”; and (3) “the witness has applied the principles and methods reliably to the facts of the case.” Similarly, Rule 703 of the Federal Rules of Evidence requires that the expert rely on “facts or data,” and not their own subjective impressions. *See Cella*, 998 F.2d at 423 (“An expert witness cannot simply guess or base an opinion on surmise or conjecture.”).

The district court must act as a gatekeeper in ensuring “that any and all scientific testimony or evidence is not only relevant, but reliable.” *Daubert*, 509 U.S. at 589. In determining reliability of an expert witness, a court can use the following factors in its evaluation: (1) whether the expert’s conclusions are falsifiable; (2) whether the expert’s method has been subject to peer review; (3) whether there is a known error rate associated with the technique; and (4) whether the method is generally accepted in the relevant scientific community. *Id.* at 593-594.

In the present case, Norfolk Southern argues that the basis of Dr. Gates’ testimony should be excluded because it is not grounded on reliable scientific principles and methods. Dr. Gates claims to have used a differential etiology or differential diagnosis in reaching his causation opinion. “[I]n a differential etiology, the doctor rules in all the potential causes of a patient’s ailment and then by systematically ruling out causes that would not apply to the patient, the physician arrives at what is the likely cause of the ailment.” *Myers*, 629 F.3d at 644. Both differential etiology and differential diagnoses are accepted and valid methodologies for an expert to render an opinion about the identity of a specific ailment. *Brown v. Burlington Northern Santa Fe Railway Co.*, 765 F.3d 765, 772 (7th Cir. 2014) (citing *Myers*, 629 F.3d at 644). “However, an expert must do more than just state that she is applying a respected methodology; she must follow through with it.” *Id.* at 773.

Norfolk Southern contends that Dr. Gates did not use a proper methodology to “rule in” Messenger’s work as a rail yard conductor as the primary cause to his ailments. Dr. Gates claims to have used an etiologic methodology in ruling in Messenger’s work at Norfolk Southern by following the AMA Guidelines to the Evaluation of Disease and Injury causation. Dr. Gates’

testimony, however, shows that he did not follow his claimed methodology. In assessing the available epidemiologic evidence for a causal relationship, Dr. Gates claims to have reviewed relevant literature, but his testimony makes clear that he did not actually review any literature before making his determination.

Similarly, for obtaining and assessing evidence of exposure, Dr. Gates relied on Messenger's testimony, the job descriptions of a conductor position for railroads other than Norfolk Southern, the video of CSX railroad workers that did not involve the conductor position, and his own general understanding of railroad work, instead of a quantified personal or individualized measurement. None of those sources would allow Dr. Gates to objectively measure the force or frequency of workplace exposure to which Messenger was allegedly exposed.

According to the hierarchy of exposure data stated in the AMA Guidelines, a quantified personal or individualized measurement is the "best" type of data, whereas information obtained from the employer is the "worst" type of data. It is undisputed that Dr. Gates relies on no individualized measurement of Messenger's exposures. When asked if he believed a quantified personal or individualized measurement would be the best type of evidence when applying his methodology, Dr. Gates said he would "disagree." The fact that Dr. Gates disagrees with the very methodology he claims to be following shows that he is not using reliable scientific principles in his application.

The facts here are similar to those of the recently decided Seventh Circuit case *Brown v. Burlington Northern Santa Fe Railway Company*, 765 F.3d 765 (7th Cir. 2014). In *Brown*, the plaintiff was a railroad worker who sued his employer under FELA alleging cumulative trauma

to his wrists, elbow, and shoulder caused by his job duties. Additionally, the plaintiff, like Messenger, rode a motorcycle and was obese. He was also a volunteer firefighter.

The plaintiff retained a medical expert who opined that the plaintiff's job duties at the railroad were the primary cause of his injuries. Much like Dr. Gates, the medical expert used differential etiology in forming and coming to his conclusion. The medical expert noted that his method required him to conduct a job site analysis. However, the medical expert, like Dr. Gates, failed to follow his own stated methodology by failing to perform an independent investigation or assessment of the plaintiff's work activities. The expert also had never visited the particular rail yard in question or witnessed the plaintiff perform his duties. Instead, like Dr. Gates, the medical expert relied on the testimony of the plaintiff and his own observations he had witnessed at a random rail yard ten years prior. The medical expert also stated he had discounted the plaintiff's weight because he was not morbidly obese.

The district court excluded the medical expert's opinions as unreliable because he deviated substantially from recognized scientific practices. On appeal, the Seventh Circuit affirmed the district court's exclusion of the causation opinions of the plaintiff's medical expert for failing to use a proper methodology to "rule in" plaintiff's workplace activity at the railroad yard as a potential cause of plaintiff's carpal tunnel and cubital tunnel syndrome.

The Seventh Circuit noted the medical expert failed to follow his own stated procedures in his report and did not conduct a legitimate investigation into plaintiff's alleged workplace exposure. *Brown*, 765 F.3d at 775. The plaintiff claimed that precise measurements of the duration and frequency of workplace exposure were unnecessary because no precise relationship between the frequency and duration of exposure and a cumulative trauma injury is known. *Id.*

In denying plaintiff's argument, the Seventh Circuit stated measurements of the frequency and duration of exposure would have given the doctor a reliable basis for opining the plaintiff's work activities played a role in his injury because it would allow the doctor to test and compare the data against other sources of trauma to which the plaintiff had been exposed. *Id.*

In *Myers v. Illinois Central Railroad Co.*, 679 F. Supp. 2d 903 (C.D. Ill. 2010), the district court excluded the causation opinions of the plaintiff's doctors for the same insufficiencies present here:

Here, the doctors do not know any specifics about Plaintiff's job duties and they did not attempt to quantify the physical requirements of those jobs. They do not know the forces involved in any of Plaintiff's work activities, or the forces required to cause any of Plaintiff's alleged injuries. They have never been to any of Plaintiff's job sites nor observed Plaintiff's work. The doctors also do not cite any specific scientific literature to support their causation opinions or any threshold levels for causation, nor have they measured the forces involved.

Id. at 915. The district court concluded that "[t]he doctors opinions regarding causation were not based on testing or review of scientific data but rather were based upon speculation and assumption." The court held that the doctors "did not use a methodology sufficient to meet the reliability prong of the *Daubert* test and their testimony regarding causation should be excluded." *Id.*

The Seventh Circuit affirmed the district court's exclusion of the doctors, finding that their "testimonies made it clear that they were offering a general medical opinion about [plaintiff's] condition at the time of treatment and an assumption that it developed over time at the Railroad," and noting that "[o]ther than common sense, there was no methodology to their etiology." *Myers*, 629 F.3d at 645. The Court of Appeals concluded that because the doctors "knew little to nothing about [plaintiff's] medical history or his work and "did not 'rule in' any

potential causes or ‘rule out’ any potential causes,” the record made it clear that “the district court did not abuse its discretion by excluding the testimony of [plaintiff’s] physicians.” *Id.*

In the present case, Dr. Gates claims to have used an etiologic methodology by following the AMA guidelines. Unlike Mr. Weames, however, Dr. Gates did not observe Messenger doing his job at the railroad or take any measurements at the job site, nor did he make any attempt to quantify the forces that Messenger’s right hand, elbow, and arm would have been subjected to in performing his job at the Elkhart yard. He did not read any epidemiological studies on the job tasks that Messenger performed and is not aware of literature on the length of time a person must perform the tasks of a conductor to develop carpal tunnel syndrome and cubital tunnel syndrome. He is not an ergonomist and does not have any experience in the field of ergonomics. Dr. Gates did even less than the expert in *Brown* who at least took pictures of the plaintiff holding various tools he worked with. He did not and could not know the level of force and frequency Messenger was allegedly exposed to at his workplace. As stated by the Court in *Brown*, having such data would have given Dr. Gates a reliable basis to offer his opinion.

Dr. Gates’ actions show that he deviated substantially from his own stated methodology. The purpose of going to the actual work site, witnessing the actual tasks of a Norfolk Southern conductor, and measuring and recording the force, duration, and frequency of exposure to Messenger’s right hand is to prevent an expert, like Dr. Gates, from relying on their own subjective experience or bias and instead on reliable scientific methods. *Brown*, 765 F.3d at 775. In failing to partake in these tasks, Dr. Gates’ methodology for coming to his opinion cannot be objectively tested and reviewed, thus making it scientifically unreliable.

Just like the medical experts in *Brown* and *Meyers*, Dr. Gates is offering a conclusory

opinion about Messenger's condition with the assumption that it developed over time at Norfolk Southern's rail yard. For cumulative trauma cases and the *Daubert* principles, however, that is not enough. *See id.*, at 645 (“[T]he law demands more than a casual diagnosis that a doctor may offer a friend or acquaintance outside the office about what could be causing his aches and pains.”).

Norfolk Southern also argues that Dr. Gates did not use a proper methodology to “rule out” relevant factors that may cause carpal tunnel and cubital tunnel syndrome. Dr. Gates failed to properly account for a number of obvious non-work-related factors as possible alternative explanations to Messenger's ailments as required by his own alleged methodology and the AMA Guidelines. The causal link Dr. Gates drew between Messenger's job and his injuries lay in the presence of stressful repetitive-type motions that can harm elbows, wrists, and arms over time. The handlebars of a motorcycle and power tools vibrate, and swinging a golf club is a repetitive and torqued motion. Furthermore, one must grip and twist the throttle of a motorcycle while riding it. One must also strongly grip a golf club and power tools while using in order to prevent them from leaving the hand. Therefore, based on Dr. Gates' own assessment, Messenger's motorcycle riding, golfing, and use of power tools were all relevant non-work-related factors that could lead to alternate explanations regarding the cause of Messenger's injuries. *See id.* at 773 (“The district court did not abuse its discretion in finding that [plaintiff's] motorcycle riding and volunteer firefighting were obvious potential alternative causes for his injuries.”).

Dr. Gates knew that Messenger regularly rode a motorcycle, but he did not have a quantitative assessment nor did he know the frequency or duration of the rides. Dr. Gates also did not have a quantitative assessment of Messenger's golf activities or use of power tools and

he could not name or show any literature on the subject. Dr. Gates' lack of investigation into any of these alternative causes shows that he did not consider them in forming his opinion which is inconsistent with his alleged etiological methodology in which he used the AMA Guidelines.

Dr. Gates claims he could disregard these factors because he assumed Messenger worked for longer periods than he rode his motorcycle, played golf, or used power tools. This is the exact same argument used by plaintiff's medical expert in *Brown* to conclude the plaintiff's motorcycle riding was not a factor in the causation of his injury. *See id.* at 774 ("The doctor disregarded [plaintiff's] motorcycle riding as a factor because he assumed [plaintiff] worked for longer periods than he rode."). However, as the court in *Brown* pointed out, the proper question is not how long did Messenger work compared to those other factors, but how long was Messenger exposed to harmful factors while at work as compared to how long was he exposed to those factors while riding his motorcycle, playing golf, and using power tools. *Id.* Without knowing the level or frequency of Messenger's motorcycle riding, golf playing, and use of power tools, or his duration and frequency of workplace exposure, Dr. Gates could not possibly answer that question in a systematic, testable fashion because they would be unknown variables.

While Dr. Gates disputes that he applied two unknown variables, there is no evidence in the record as to known variables, as required by *Brown*. Without more, Dr. Gates, like the expert in *Brown*, could not "have enough information to conclude that one value was higher than the other, or even to doubt that the former overwhelmingly exceeded the latter." *Id.* Dr. Gates' determination must have been based on "[c]omparing two unknown, potentially wide-ranging variables" which is not a scientific exercise. *Id.* As the court in *Brown* said, "[t]here is no known error rate attached to such a calculation, nor is such guesswork widely accepted in the scientific

community.” *Id.* (citing *Daubert*, 509 U.S. at 593-594). By simply ruling out Messenger’s non-work-related factors with evidence of general understanding of time and opinion, Dr. Gates showed his methodology was not and could not be based on reliable scientific principles.

Dr. Gates also failed to properly investigate a number of Messenger’s health related factors including obesity, diabetes, and rheumatoid arthritis, much like the expert in *Brown* who failed investigate and systematically ruled out the plaintiff’s obesity. *Id.* In his deposition, Dr. Gates stated Messenger had all of the risk factors for carpal tunnel syndrome, but none of these health-related issues could be the prominent factor in his development of carpal and cubital tunnel syndrome because none involved a motion of some kind. Yet, Dr. Gates offered no evidence to make such an assertion.

Once again, Dr. Gates’ testimony shows his causation opinion was based on pure conjecture and not a reliable basis or methodology. He did not rely on any literature and could not show in an objective and testable fashion whether or not any of Messenger’s health factors were the cause of his injuries. Additionally, because Dr. Gates failed to reliably rule out Messenger’s motorcycle riding, golf playing, and use of power tools, it is just as likely that one of those factors combined with Messenger’s many health factors to cause his injuries. Without a more reliable and scientific methodology, however, it is impossible for one to discern. *See id.* (“[Plaintiff’s] weight could have made it more likely that his motorcycle riding or volunteer firefighting was solely responsible for his condition. Of course, we can only speculate because [plaintiff’s expert witness] did not adequately investigate this possibility.”).

Dr. Gates admits that he does not know whether there is a known error rate associated with his technique or methodology, a factor under the *Daubert* analysis. Furthermore, while

claiming he relied on peer-reviewed literature in applying his methods, Dr. Gates stated he could not remember the names nor point to any of those papers. When asked whether his opinion was falsifiable, Dr. Gates stated that it was not. However, according to the report of Dr. Levine, Dr. Gates's conclusion was falsifiable because he relied on non-testable subjective opinions and information.

Dr. Gates conducted no independent research nor has he published any articles on carpal tunnel syndrome or cubital tunnel syndrome. He is not an ergonomist and did not rely on any ergonomic report for his conclusion.

In response, Messenger argues that *Brown* is not applicable, and that Dr. Gates' methodology has been approved in other cases. Messenger also argues that Dr. Gates never claimed to have used the AMA Guidelines, and that he disavowed those guidelines. However, Messenger's assertion that *Brown* is distinguishable from the current case because the expert in *Brown* failed to follow his stated methodology while Dr. Gates did follow his methodology is incorrect. The issue in *Brown* was not that admissibility hinged on whether the expert performed a work site analysis as stated in his report. Rather, the issue was whether the plaintiff could establish that his expert followed scientific methods to "reliably ascertain whether [plaintiff's] work was even a contributing factor to his injury" and reliably "rule out obvious potential causes." *See Brown*, 765 F.3d at 774-775. Based on the evidence presented, the court in *Brown* determined the plaintiff could not establish that his expert followed reliable scientific principles. Because Dr. Gates' methodology for determining the cause of Messenger's carpal syndrome almost mirrors that of the expert in *Brown*, his methodology cannot be based on scientific principles.

As noted above, while the expert in *Brown* claimed in his report to have used a work site analysis in order to “rule in” plaintiff’s work as a factor, the court found the expert simply reviewed the plaintiff’s medical history, spoke with and performed a medical examination of the plaintiff, took pictures of the plaintiff holding various work tools, and relied on memory and past experience from a rail yard at which the plaintiff had never worked. *Id.* at 769-770. Based on this evidence, the court determined the expert had not performed a legitimate investigation and could not “rule in” plaintiff’s work as a contributing factor to his injury. *Id.* 775. The court stated that if the expert had performed a work site analysis as was stated in his report, then he would have had results that “could be objectively tested, peer reviewed, and reproduced.” *Id.* These results would have allowed the expert to “rule in” plaintiff’s workplace exposure as a possible cause. In refuting the plaintiff’s argument that measurements of frequency and duration of vibratory exposure are not needed in cumulative trauma cases, the court stated:

But because [plaintiff] was exposed to multiple sources of continued vibration and other trauma, [expert] had to have some reliable basis for opining that [plaintiff’s] work activities played at least a small role in his injury. Data comparing the relative duration and frequency of exposure could have provided that basis; perhaps there were other ways. But [expert] did not pursue any of them.

Id.

In the present case, Dr. Gates claims to have “ruled in” Messenger’s alleged vibratory workplace exposures as the cause of his carpal tunnel syndrome by using reliable scientific methods. However, like the expert in *Brown*, Dr. Gates used his own medical examination and conversations with the Messenger, along with Messenger’s medical history. Furthermore, Dr. Gates relied on his own knowledge of carpal tunnel syndrome and the conductor descriptions and video of rail yard workers for companies other than Norfolk Southern. Likewise, Dr. Gates

did not use any objective data to measure the force, frequency, or duration Messenger was allegedly exposed to in his position as a conductor for Norfolk Southern. None of the information relied on by Dr. Gates to “rule in” Plaintiff’s alleged vibratory workplace exposure can be measured, objectively tested, peer reviewed, or reproduced. Even the data relied on by the expert in *Brown* was greater than that of Dr. Gates because the expert in *Brown* at least took photos of the plaintiff holding the tools that led to the alleged harmful exposures.

Messenger must show that Dr. Gates’ investigation into Messenger’s alleged vibratory workplace exposures used some type of scientific method or measure to reliably opine those exposures could have been a cause of Messenger’s injury. Clearly, Dr. Gates’ methodology is subjective and not based on scientific principles. Simply stating a methodology is correct does not mean it is based on reliable scientific principles. *See Myers v. Illinois Central R. Co.*, 629 F.3d 639, 644 (7th Cir. 2010) (“Other than [plaintiff]’s assertion that the physicians did a differential etiology, there is nothing in the record that suggests they did, or if it was done that it could be considered reliable . . .”).

Also, as noted above, Messenger also failed to show how Dr. Gates adequately investigated his nonworkplace exposures in order to reliably “rule them out” as alternate potential causes. Other than stating he could find no peer literature on the subject and Messenger’s non-workplace exposures would be infrequent or occasional, Messenger makes very little mention of how Dr. Gates ruled out his motorcycle riding, golf playing and use of power tools. Messenger still does not address the issue of how Dr. Gates could compare the level and frequency of Messenger’s non-workplace exposures to his workplace exposure other than by comparing two unknown variables. As stated by the court in *Brown*, simply assuming

Messenger's workplace exposure was greater than his non-workplace exposures is not a scientific exercise. *Brown*, 765 F.3d at 774. Moreover, Messenger does not address the issue of whether his numerous health factors coupled with his non-workplace exposures was the single cause. *See id.* (“[Plaintiff’s] weight could have made it more likely that his motorcycle riding or volunteer firefighting was solely responsible for his condition. Of course, we can only speculate because [expert] did not adequately investigate this possibility.”). Again, without some type of investigation, Dr. Gates cannot say he reliably ruled those potential causes out because there is no objective evidence to measure or test.

The additional cases relied on by Messenger, *Boyd v. CSX Trans. Inc.* 2:08cv108, 211 WL 854350 (N. D. Ind. March 7, 2011) and *Dohse v. NSRC*, 2:11cv99 (N.D. Ind. March 18, 2014), are distinguishable from the present case and further support Norfolk Southern's contention. Also, they predate *Brown* (which was decided in August of 2014), and *Brown's* holding now controls the issues raised in those cases and this one. In *Boyd*, the court determined the expert had relied on several studies, publications, and journal articles, which he had attached to his report, when he applied his methodology. (*Boyd* Order, 5). Additionally, the *Dohse* court found the expert had a reliable basis to “rule in” plaintiff's workplace exposure because the expert had relied on a biomechanical analysis of the forces plaintiff encountered on his job. (*Dohse* Order, 4).

Unlike in *Boyd*, Dr. Gates' investigation did not rely on any scientific literature nor did he attach any articles to his report. Additionally, Dr. Gates did not perform or have a biomechanical analysis like as in *Dohse*. Just like *Brown*, *Boyd* and *Dohse* stand for the proposition that an expert must use some type of objective or scientific data to form their

conclusions when using differential etiology, something Dr. Gates did not do in the current case.

Messenger also claims that he does not have to establish quantitative “dose” evidence. However, as already stated above, *Brown* requires that an expert have some type of objective evidence of workplace and non-workplace exposures to reliably “rule in” and “rule out” the causes of a cumulative trauma injury. *Id.* at 775. Without any objective measurement of the different exposures Messenger was subject to, whether it would be through a quantitative measurement or some other reliable form, Dr. Gates’ methodology cannot possibly be based on scientific principles because he would be comparing unknown variables.

Messenger also attempts to confuse Norfolk Southern’s argument by claiming “Defendant claims that the AMA Guidelines are Dr. Gates’ ‘own stated methodology’ but that is simply untrue” and this “is a blatant straw man argument.” (Plaintiff Response Brief, 7). Specifically, Messenger states that “[w]hile Defendant attempts to show Dr. Gates did not follow his methodology, a fair reading of Dr. Gates’ disclosures and his deposition shows that Defendant’s counsel at deposition proposed a methodology that Dr. Gates disavowed as not applicable to Carpal Tunnel Syndrome . . . cases.” (Plaintiff Response Brief, 2).

While Norfolk Southern did introduce the AMA Guidelines, Dr. Gates stated that he used those guidelines when coming to his conclusions. (Gates Dep. at 39:1-6). While Dr. Gates said he disagreed with the AMA Guidelines on the hierarchy of the best type of evidence for evaluating whether a work-related source was the cause of the injury, he never disavowed the AMA Guidelines as not being relevant to a carpal tunnel case. Furthermore, while Messenger claims a fair reading of the record shows that Dr. Gates did not apply the AMA Guidelines because he determined they were irrelevant to carpal tunnel syndrome, Messenger goes on to

admit that “Dr. Gates followed the six steps the AMA recommends to determine ‘work-relatedness of a disease’” in his Response Brief. (Plaintiff Response Brief, 5).

Even assuming a fair reading of the record shows that Dr. Gates never claimed to have applied or incorporated the AMA Guidelines when he “ruled in” and “ruled out” the causes of Messenger’s carpal tunnel syndrome, Messenger still does not show how Dr. Gates’ determination was based on scientific principles and not subjective opinion. Had Dr. Gates followed the AMA Guidelines, as he claimed he did in his deposition, he could have shown his determination was based on scientific principles. However, because the record shows Dr. Gates relied on his subjective opinion and not the AMA or any other scientific method, his methodology is unreliable.

Messenger attempts to refute the experts relied on by Norfolk Southern. Specifically, Messenger states Mr. Weames did not “quantify Plaintiff’s exposures to CTS risk factors.” (Plaintiff Response Brief, 9). Mr. Weames, however, did perform a job site analysis to quantify the level of stress and frequency to which a Norfolk Southern conductor at the Elkhart Rail yard would be exposed. *See Weames Report*. Messenger also attempts to confuse the issue at hand by stating Dr. Levine is unfamiliar with the legal standards under FELA. (Plaintiff Response Brief, 9). This argument does not address the reliability of Dr. Gates’ methodology and cannot help Messenger prove his burden. *See Brown*, 765 3d. at 775 (“pointing out deficiencies in the defendant’s expert testimony cannot help [plaintiff], who bears the burden of proving negligence and demonstrating the reliability of his own expert.”).

Messenger has not shown that Dr. Gates’ method is “generally accepted in the scientific community” nor that his “process could not produce falsifiable results or survive peer review.”

Brown, 765 F.3d at 776. Without more, Dr. Gates' methodology does not pass Fed. R. of Evid. 702 and *Daubert*. Because his methodology is unreliable, Dr. Gates' testimony will be excluded.

Although Messenger disclosed his treating physicians as causation witnesses, they admitted in their depositions that they are not offering causation opinions. Messenger agrees that his treating physicians have not offered any opinions as to medical causation. Because Messenger has offered no evidence of medical causation, summary judgment must be entered for Norfolk Southern.

Conclusion

On the basis of the foregoing, Norfolk Southern's motions to exclude expert testimony [19] and motion for summary judgment [DE 21] are both hereby GRANTED.

Entered: March 5, 2015.

s/ William C. Lee
William C. Lee, Judge
United States District Court